217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT
RENEWAL

PERMITTEE

Wirco Castings, Inc.
Attn: Mike Wirth
Rural Route 1
New Athens, Illinois 62264

Application No.: 72090199 I.D. No.: 163811AAA
Applicant's Designation: Date Received: October 1, 2002
Subject: Gray Iron Foundry
Date Issued: Expiration Date:
Location: Rural Route 1, New Athens, St. Clair County

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of two (2) electric induction furnaces, three (3) grinders controlled by a baghouse, wheelabrator controlled by a baghouse, shakeout machines, mold machines and molding turntables, core machines, sand handling system (hoppers, belt conveyors, sand storage bins, sand muller) all controlled by a wet collector pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., PM_{10} greater than 100 ton/yr). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.

b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.

c. This permit supersedes all operating permits issued for this location.

2. Operation and emissions of the gray iron foundry shall not exceed the following limits:

   a. Tons of iron produced: 1,440 ton/mo; 14,400 ton/yr;

   b. Tons of foundry sand handling: 36,890 ton/mo; 368,900 ton/yr;

   c. The amount of binder:

      i. Shell core binder system (resin): 5 ton/mo; 50 ton/yr; and

      ii. Green sand binder system (seacoal): 20 ton/mo; 200 ton/yr.

   d. Particulate matter emissions less than or equal to PM_{10} emissions: 7 ton/mo; 70.3 ton/yr; and

   e. Emissions as detailed in Attachment A.

3. The Permittee shall maintain the following records in order to determine compliance with the limits specified in Condition 2 above. Compliance with annual limits shall be determined from a running total of 12 months of data. Records may be kept on a four week, 13 periods/year basis.

   a. Total iron produced (ton/mo and ton/yr);

   b. Foundry sand handled (ton/mo and ton/yr); and

   c. Binder usage (ton/mo and ton/yr).

4a. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the pollution control equipment covered under this permit such that the pollution control equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.

b. For each control equipment, the Permittee shall, at a minimum, perform internal and external inspections, twice each year. Permittee shall inspect for leaks, holes, wear, and other problems, and timely repair all problems found.

c. The Permittee shall maintain maintenance records on the premises and the maintenance records shall be subject to inspections by the Illinois EPA as specified in Condition No. 4 of the Illinois EPA's Standard Conditions for Operating Permits.

5. Annual emissions of regulated air pollutants as calculated in Attachment A shall not exceed (PM_{10}: 70.3, TSP: 82.0, NO_x: 0.46, SO_2: 0.39, VOM: 9.65 and HAP: 2.0) tons, which shall be the permitted emissions for this site.

6. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would require the Permittee to obtain a CAAPP permit from the Illinois EPA. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.

7. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.

8. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping

requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.

9. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234

10. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year: Material usage and gray iron production (ton/mo and ton/yr).

It should be noted that this permit has been renewed and updated to include short term emission limits.

If you have any questions on this, please call Ross Cooper at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:RWC:jar

cc: Illinois EPA, FOS Region 3
Illinois EPA, Compliance Section
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the gray iron foundry operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels, e.g., 100 ton/yr of PM_{10} at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

Activities	Raw Material (T/Yr)	Pollutant	Emission Factor (Lb/Ton)	Emissions (Ton/Mo)	Emissions (Ton/Yr)
Casting Transfer, Shakeout, Knockout	14,400 (Gray Iron)	PM	3.20	2.3	23.04
		PM_{10}	2.24	1.61	16.13
		VOM	1.20	0.864	8.64
Grinding/Cleaning*	14,400 (Gray Iron)	PM	0.17	0.122	1.22
		PM_{10}	0.017	0.012	0.12
Castings Finishing	14,400 (Gray Iron)	PM	0.01	0.07	0.07
		PM_{10}	0.0045	0.03	0.03
Sand Handling**	368,900 (Sand)	PM	0.046	0.85	8.50
		PM_{10}	0.046	0.85	8.50
Melting/Pouring:					
Electric Induction Furnace	14,400 (Gray Iron)	PM	0.9	0.648	6.48
		PM_{10}	0.86	0.619	6.19
		P_b	0.0425	0.031	0.31
Charge Handling	14,400 (Gray Iron)	PM	0.6	0.432	4.32
		PM_{10}	0.36	0.259	2.59
Pouring/Casting	14,400 (Gray Iron)	PM	2.8	2.01	20.16
		PM_{10}	2.8	2.01	20.16
		SO_2	0.02	0.014	0.14
		NO_x	0.01	0.07	0.07
		VOM	0.14	0.101	1.01
Casting Cooling	14,400 (Gray Iron)	PM	1.4	1.00	10.08
		PM_{10}	1.4	1.00	10.08
Molding Operations:					
Shell Core Binder System	50 (Resin)	Total HAPs	0.026222	0.131	1.31
Green Sand Binder System	200 (Seacoal)	Total HAPs	0.001076	0.022	0.22
Cores:					
Core Making, Baking Isocure	9,400 (Gray Iron for Core Use)	PM	1.1	0.517	5.17
		PM_{10}	0.9	0.423	4.23

Activities	Raw Material (T/Yr)	Pollutant	Emission Factor (Lb/Ton)	Emissions (Ton/Mo)	Emissions (Ton/Yr)
Shell	5,000 (Gray Iron for Shell)	PM	1.1	0.275	2.75
		PM_{10}	0.9	0.225	2.25
Core Machine	1,560 (Tons Core Produced)	SO_2	0.32	0.025	0.25
		NO_x	0.5	0.039	0.39

* PM control by baghouse, 99% efficiency

** PM control by wet collector, 98.73% efficiency

These limits are based on applicant submitted data, AIRS and AP-42 emission factors with a production and raw material usage limit below major source thresholds. HAP emission factors are taken from the book, "Calculating Emission Factors for Pouring, Cooling, and Shake Out", Gary E. Mosher, Modern Casting, October, 1994.

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